PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents
United States Patent and Trademark Office
Box PCT
Washington, D.C.20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 28 January 2000 (28.01.00)	
International application No. PCT/ES99/00145	**Applicant's or agent's file reference** 199.099/MAD
International filing date (day/month/year) 19 May 1999 (19.05.99)	**Priority date** (day/month/year) 20 May 1998 (20.05.98)
Applicant ALVAREZ BERENGUER, Antonio et al	

1. The designated Office is hereby notified of its election made:

   [X] in the demand filed with the International Preliminary Examining Authority on:

   15 December 1999 (15.12.99)

   [ ] in a notice effecting later election filed with the International Bureau on:

   _____

2. The election [X] was

   [ ] was not

   made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Juan Cruz

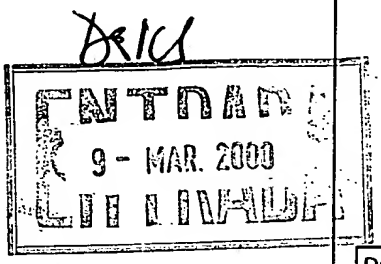
Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

09/700818

From the:
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
UNGRIA LOPEZ, Javier
Avda. Ramon y Cajal, 78
E-28043 MADRID
ESPAGNE



PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing *(day/month/year)*	07.03.00
Applicant's or agent's file reference: 199.099/MAD	**REPLY DUE** **within 3 month(s)** from the above date of mailing

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/ES99/00145	19/05/1999	20/05/1998

International Patent Classification (IPC) or both national classification and IPC
C04B14/10

Applicant
TOLSA, S.A. et al.

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

I	☒	Basis of the opinion
II	☐	Priority
III	☐	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV	☐	Lack of unity of invention
V	☒	Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
VI	☐	Certain document cited
VII	☐	Certain defects in the international application
VIII	☐	Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 20/09/2000.

Name and mailing address of the international preliminary examining authority:
European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer / Examiner
Harbron, J

Formalities officer (incl. extension of time limits)
Hartmann, M
Telephone No. +49 89 2399 8039

I. Basis of the opinion

1. This opinion has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".*):

Description, pages:

1-9 as originally filed

Claims, No.:

1-12 as originally filed

2. The amendments have resulted in the cancellation of:

☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

3. This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1, 2, 4, 8, 9, 12 No: 3, 5-7, 10, 11 Yes
Inventive step (IS)	Claims	1, 2, 4, 8, 9, 12 No: 3, 5-7, 10, 11 Yes
Industrial applicability (IA)	Claims	1-12 Yes

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

   D1: World Patents Index Database, Accession number 1987-166464
   D2: EP-A-0773198

2. Document D1 discloses a fireproof inorganic fibre board comprising a semi-dry moulding which contains inorganic fibres, cellulose derivatives, complex chain structure-type clays such as sepiolite and attapulgite, water repellants, organic binders such as plant gums, inorganic fillers such as gypsum and flame retarders (abstract). In the light of this disclosure, the subject-matter of independent claims 1, 9 and 12, and also that of dependent claim 4 is not novel (Art. 33(2) PCT).

3. Document D2 discloses a thickening additive for building material mixtures which contains at least a cellulose ether, a starch ether, and a layered silicate (claim 1). The layered silicate may be sepiolite (page 2, line 49) and may be in an amount from 30-80 wt. percent (page 2, lines 49-52). The additive may contain polysaccharides esp. agar, guar, xanthan etc. in amounts up to 30 weight percent (page 2, lines 53-55). The additive may be used in gypsum putties (claim 10). In the light of this disclosure the subject-matter of independent claims 1 and 9, and also that of dependent claims 2 and 8 is not novel (Art. 33(2) PCT).

Re Item VIII

Certain observations on the international application

1. In dependent claim 6 reference is made to a combination of monosaccharides which is sterified with an alkylene oxide. It would appear that the monosaccharide should be "etherified" rather than sterified (Art. 6 PCT).

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Correspondence with the EPO on PCT Chapter II demands

In order to ensure that your PCT Chapter II demand is dealt with as promptly as possible you are requested to use the enclosed self-adhesive labels with any correspondence relating to the demand sent to the Munich Office.

One of these labels should be affixed to a prominent place in the upper part of the letter or form etc. which you are filing.

TRATADO DE COOPERACIÓN EN MATERIA DE PATENTES

PCT

09/700818

INFORME DE BÚSQUEDA INTERNACIONAL

(Artículo 18 y reglas 43 y 44 del PCT)

Referencia del expediente del solicitante o del mandatario	**PARA CONTINUAR LA TRAMITACIÓN** ver la notificación de transmisión del informe de búsqueda internacional (Formulario PCT/ISA/220) y, en su caso, el punto 5 de esta hoja.	
Solicitud internacional nº PCT/ES 99/00145	Fecha de presentación internacional *(día/mes/año)* 19 Mayo 1999 (19.05.1999)	Fecha de prioridad (la más antigua) *(día/mes/año)* 20 Mayo 1998 (20.05.1998)

Solicitante TOLSA S.A. Y ÁLVAREZ BERENGUER, Antonio; LIMPO OROZCO, Francisco Javier; DEL VALLE ÁLVAREZ Bernardo Enrique; HIDALGO MARTIN, Manuel para EE.UU.

El presente informe de búsqueda internacional, elaborado por esta Administración encargada de la Búsqueda Internacional, se transmite al solicitante, conforme al artículo 18. Se remite una copia del mismo a la Oficina Internacional.

Este informe de búsqueda internacional comprende un total de 3 hojas.

☐ Se adjunta una copia de cada uno de los documentos citados en el informe relativos al estado de la técnica.

1. **Consideraciones sobre el informe**

a. En lo que se refiere al **idioma**, la búsqueda internacional se ha realizado sobre la solicitud internacional en el idioma en el cual se depositó, salvo indicación en contra señalada en este apartado.

☐ la búsqueda internacional se ha realizado sobre una traducción de la solicitud internacional facilitada a esta Administración (Regla 23.1 b)).

b. En lo que se refiere a **las secuencias de nucleótidos y/o de aminoácidos** divulgadas en la solicitud internacional (en su caso), la búsqueda internacional se ha basado en la lista de secuencias:

☐ contenida en la solicitud internacional en formato escrito.

☐ presentada conjuntamente con la solicitud internacional en soporte legible por ordenador.

☐ facilitada posteriormente a esta Administración por escrito.

☐ facilitada posteriormente a esta Administración en soporte legible por ordenador.

☐ se ha entregado la declaración, según la cual la lista de secuencias presentada por escrito posteriormente no va más allá de la divulgación hecha en la solicitud internacional tal y como fue presentada.

☐ se ha entregado la declaración, según la cual la información grabada en el soporte legible por ordenador es idéntica a la lista de secuencias presentada por escrito.

2. ☐ **Se estima que algunas reivindicaciones no pueden ser objeto de búsqueda** (ver recuadro I).

3. ☐ **Falta unidad de invención** (ver recuadro II).

4. Con respecto al **título**,

☒ el texto se aprueba según fue remitido por el solicitante.

☐ el texto ha sido establecido por esta Administración con la siguiente redacción:

5. Con respecto al **resumen**,

☒ el texto se aprueba según fue remitido por el solicitante.

☐ el texto (reproducido en el recuadro III) ha sido establecido por esta Administración de conformidad con la regla 38.2b). El solicitante puede presentar observaciones a esta Administración en el plazo de un mes a contar desde la fecha de expedición del presente informe de búsqueda internacional.

6. La figura de los **dibujos** a publicar junto con el resumen es la siguiente: Figura nº _____

☐ propuesta por el solicitante. ☒ No debe publicarse ninguna figura.

☐ por no haber propuesto el solicitante ninguna figura.

☐ por caracterizar mejor, esta figura, la invención.

INFORME DE BÚSQUEDA INTERNACIONAL

Solicitud Internacional nº
PCT/ES99/00145

A. CLASIFICACIÓN DEL OBJETO DE LA SOLICITUD

CIP[6] C04B 14/10; 24/38
De acuerdo con la Clasificación Internacional de Patentes (CIP) o según la clasificación nacional y la CIP.

B. SECTORES COMPRENDIDOS POR LA BÚSQUEDA

Documentación mínima consultada (sistema de clasificación, seguido de los símbolos de clasificación)

CIP[6] C04B

Otra documentación consultada, además de la documentación mínima, en la medida en que tales documentos formen parte de los sectores comprendidos por la búsqueda

Bases de datos electrónicas consultadas durante la búsqueda internacional (nombre de la base de datos y, si es posible, términos de búsqueda utilizados)
WPI, EPODOC

C. DOCUMENTOS CONSIDERADOS RELEVANTES

Categoría*	Documentos citados, con indicación, si procede, de las partes relevantes	Relevante para las reivindicaciones nº
X	Base de datos WPI en Derwent, semana 8724, Londres: Derwent Publications Ltd., AN 87-166464, JP-62098000 (NITTO BOSEKI CO LTD), resumen	1, 9, 12
X	EP-773198 A (HOECHST AKTIENGESELLSCHAFT) 14.05.1997; pág.3, l. 32-33 + 48-49 + 51+ 53-55 + 58	1-2, 8-9
A	US-4028127 A (FRED JOHN MASKE et al.) 07.06.1977	
A	US- 5290350 A (MARIE-MADELEINE BESNARD et al.) 01.03.1994	

☐ En la continuación del recuadro C se relacionan otros documentos ☒ Los documentos de familia de patentes se indican en el anexo

* Categorías especiales de documentos citados:

"A" documento que define el estado general de la técnica no considerado como particularmente relevante.

"E" solicitud de patente o patente anterior pero publicada en la fecha de presentación internacional o en fecha posterior.

"L" documento que puede plantear dudas sobre una reivindicación de prioridad o que se cita para determinar la fecha de publicación de otra cita o por una razón especial (como la indicada).

"O" documento que se refiere a una divulgación oral, a una utilización, a una exposición o a cualquier otro medio.

"P" documento publicado antes de la fecha de presentación internacional pero con posterioridad a la fecha de prioridad reivindicada.

"T" documento ulterior publicado con posterioridad a la fecha de presentación internacional o de prioridad que no pertenece al estado de la técnica pertinente pero que se cita por permitir la comprensión del principio o teoría que constituye la base de la invención.

"X" documento particularmente relevante; la invención reivindicada no puede considerarse nueva o que implique una actividad inventiva por referencia al documento aisladamente considerado.

"Y" documento particularmente relevante; la invención reivindicada no puede considerarse que implique una actividad inventiva cuando el documento se asocia a otro u otros documentos de la misma naturaleza, cuya combinación resulta evidente para un experto en la materia.

"&" documento que forma parte de la misma familia de patentes.

Fecha en que se ha concluido efectivamente la búsqueda internacional	Fecha de expedición del informe de búsqueda internacional
15 JUL 1999	30 JUL 1999 (30.07.99)

Nombre y dirección postal de la Administración encargada de la búsqueda internacional	Funcionario autorizado
O.E.P.M. C/Panamá 1, 28071 Madrid, España. nº de fax +34 91 3495304	A. AMARO ROLDÁN nº de teléfono + 34 91 349 5544

INFORME DE BÚSQUEDA INTERNACIONAL
Información relativa a miembros de familias de patentes

Solicitud internacional nº
PCT/ES 99/00145

Documento de patente citado en el informe de búsqueda	Fecha de publicación	Miembro(s) de la familia de patentes	Fecha de publicación
JP62098000 A	07-05-1987	JP1060600B B	19.12.1989
		JP1655432C C	19.04.1992
EP0773198 A	14.05.1997	TR970426 A	21.05.1997
		JP9165468 A	24.06.1997
		PL316899 A	12.05.1997
		DE19541945 C	10.04.1997
US4028127 A	07.06.1977	CA1075727 A	15.04.1980
US5290350 A	01.03.1994	FR2669624 AB	29.05.1992
		KR9500698 B	27.01.1995
		EP0562199 AB	29.09.1993
		CA2056350 A	29.05.1992
		AU8796391 A	04.06.1992
		AU646307 B	17.02.1994
		JP4265278 A	21.09.1992
		JP2533025B2 B	19.09.1996

09/700818

PATENT COOPERATION TREATY

PCT

REC'D 16 JUN 2000
WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
199.099/MAD		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/ES99/00145	19/05/1999	20/05/1998
International Patent Classification (IPC) or national classification and IPC C04B14/10		
Applicant TOLSA, S.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
   - VI ☐ Certain documents cited
   - VII ☒ Certain defects in the international application
   - VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
15/12/1999	13.06.2000
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Harbron, J Telephone No. +49 89 2399 8453

Form PCT/IPEA/409 (cover sheet) (January 1994)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/ES99/00145

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-9 as originally filed

Claims, No.:

1-12 as received on 15/05/2000 with letter of 09/05/2000

2. The amendments have resulted in the cancellation of:

☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-12
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-12
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-12
	No:	Claims	

2. Citations and explanations

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item I

Basis of the report

1. The claims filed with the letter of reply dated 09.05.2000 are considered allowable under Article 34 (2) (b).

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document/s/:

   D1: World Patents Index Database, Accession number 1987-166464
   D2: EP-A-0773198

2. None of the cited prior art documents disclose the claimed additive nor do they address the problem of replacing expensive cellulose derivatives in such additive compositions. Consequently, the subject-matter of the claims on file is considered to be novel and inventive as required by Articles 33.2 and 33.3 PCT(but see point VIII below).

Re Item VII

Certain defects in the international application

1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.

Re Item VIII

Certain observations on the international application

1. The term "special mortar" used in claims 1, 9 and 11 is vague and unclear and

leaves the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of said claims unclear (Article 6 PCT).

2. The subject-matter of claim 1 is not sufficiently clear in that, while it covers compositions which solve the problem of replacing expensive cellulose derivatives in gypsum and mortar additives, the present wording of the claim does not exclude additive compositions which may also include such cellulose derivatives. Compositions of this nature are disclosed in D1. It would therefore appear to be appropriate to indicate the absence of cellulose derivatives in the subject-matter of claim 1 (art. 6 PCT).

CLAIMS

1. An additive for gypsum and special mortar that comprises a solid mineral component selected from among clay, characterized in that it comprises at least a modified natural gum, and in that the mineral component is a rheological grade clay selected from among attapulgite, sepiolite and mixtures thereof.

2. An additive according to claim 1, characterized in that the additive comprises at least

20-75% by weight of the solid mineral component;
25-80% by weight of modified natural gum.

3. An additive according to claim 1, characterized in that it comprises

35-60% by weight of the solid mineral component;
40-65% by weight of modified natural gum.

4. An additive according to claim 1, 2 or 3, characterized in that the solid mineral component is rheological grade sepiolite.

5. An additive according to claim 1, 2 or 3, characterized in that the modified natural gum is at least one combination of at least two monosaccharides, glucose, mannose, galactose, and glucuronic acid, modified by etherification.

6. An additive according to claim 6, characterized in that the combination of monosaccharides is etherified with an alkylene oxide selected from among ethylene oxide, propylene oxide and butylene oxide.

7. An additive according to claim 6, characterized in that the monosaccharide combination is a galactomanane.

8. An additive according to claim 1, 2 or 3, characterized in that the modified natural gum is modified guar gum.

9. A filled composition of conglomerate building material selected from among gypsum and special mortar, that comprises a fraction selected from among a cement fraction, a gypsum fraction and an aggregate fraction, characterized in that it also comprises 0.05-1.2% by weight of the additive defined in any of the claims 1 to 8.

10. A filled composition according to claim 9, characterized in that it comprises 0.2-0.9% by weight of the additive.

11. Use of an additive according to any of the claims 1-8, as a component in a special mortar.

12. Use of an additive according to any of claims 1-8 as a component in gypsum.

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OFICINA TECNICA INTERNACIONAL DE PATENTES Y MARCAS
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CORRESPONSALES ESPECIALIZADOS EN TODOS LOS PAISES DEL MUNDO

REG. MERC. MADRID, HOJA M-36005, FOLIO 184
TOMO 2.019. INSCRIPCION 1ª. C.I.F. A-28378578

JU/HA/yo **Madrid, 9th May 2000**

By fax:00/49/89/ 2399-4465 **No. of pages: 3+2= 5**

Confirmation by Registered Airmail

Re.: International Patent Application
No.: PCT/ES/00145
Priority: Spanish Patent Application P9801042 filed on the 20th May 1998
Applicant: TOLSA, S.A. *et al.*
O/ref.: 199.099/MAD

Dear Sirs:

(1) In response to the Written Opinion issued on the above referenced application, we are submitting herewith replacement sheets 10 and 11 with amended claims 1-12 in which

* claim 6 has been amended by replacing the term "sterified" by "etherified" as per the examiner's suggestion and thereby correcting the error in translating original Spanish claim 6; and

* "Additive" has been replaced by "An additive" in claims 1 through 8.

(2) The examiner states that claims 1, 4, 8, 9 and 12 lack novelty and inventive step over D1 and/or D2. With respect hereto, applicants submit the following:

(2.1) As stated by the examiner, both D1 and D2 disclose compositions which comprise cellulose derivatives i.e. CMC, MC and HEC in D1 and cellulose ether in D2.

This is contrary to the present invention which refers to an additive which contains a rheological grade clay selected

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from sepiolite and attapulgite, replacing the cellulose derivatives present in conventional additives.

Further, D1 does not refer to an additive for gypsum or special mortar, but to an inorganic fibre board and it does not refer to any clay of rheological grade. Neither does D2 refer to such clays.

In view of the above, it is submitted that the subject matter of claim 1 of the present application and therefore also the subject matter of dependent claims 2, 4, 8, 9 and 12 is novel.

(2.2) D1 refers to inorganic fibre boards i.e. it does not refer to special mortars or gypsum whilst D2 refers to a thickenening system i.e. to additives for construction material mixtures, tile glues and gypsum putties. D2 should thus be considered as being the closest prior art.

D2 which is also discussed as prior art in the present application (cf. page 2, lines 9-25) refers to an additive comprising a series of ingredients including sepiolite and attapulgite, as well as at least a cellulose ether i.e. a cellulose derivative.

Claim 1 of the present application differs from the disclosure of D2 in that it does not comprise any cellulose derivative and that it comprises a rheological grade sepiolite or attapulgite.

The problem inherent in additives containing cellulose derivatives for which D2 is representative, is that cellulose derivatives are rather expensive for use in additives for gypsum, mortars etc. As stated in page 3, lines 1-8, it is one object of the present invention to overcome the inconveniences (i.e. the rather high price) of conventional gypsum and mortar comprising cellulose derivatives, by an additive in which said derivatives by a new additive having qualities that are at least similar to additives containing cellulose additives and that allow to reduce the final costs of special mortar and gypsum compositions.

According to the present invention, this goal is achieved by a composition having the features of the characterizing portion of claim 1 namely, by a composition comprising a mineral component being a rheological grade clay selected from sepiolite and attapulgite.

Whilst D2 cites, *inter alia*, sepiolite and attapulgite as useful components in the therein disclosed additives, it is silent in respect of any teaching or suggestion in respect of how the use of cellulose derivatives could be avoided and, in fact, D2 is even absolutely silent in respect of the hereinabove mentioned problem i.e. the rather high price of cellulose derivatives.

The composition of the fibre boards disclosed in D1 does also include cellulose derivatives and does thus not provide any teaching neither on the problem

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underlying the present invention nor on the solution thereof. Moreover, whilst D1 mentions to sepiolite and attapulgite as clay components, it defines these clays as defibrated i.e. as clays from which the fibres have been removed which is contrary to the definition of the rheological grade mineral clays of the present invention in which the fibres are conserved and which are obtained by a treatment which deagglomerates the fibre bundles being present in the natural clays and which prevents breakage of the fibres. D1 does thus not only not disclose rheogical grade clays but moreover teaches away therefrom inasmuch it teaches the use of defibrated sepiolite and attapulgite.

In view of the above, even if the skilled person had considered to use the defibrated clays disclosed in D1 in an additive according to D2, the resulting additive would still include a cellulose derivative and, furthermore, would not include a rheological grade clay.

There is thus no teaching or suggestion in D1 or D2, alone or when taken in combination with each other, which would have guided the skilled person to replace cellulose derivatives by a rheological grade clay selected from sepiolite and attapulgite as defined in claim 1 of the present application with the expectation of similar workabilities and final properties in special mortar and gypsum to those including additives with conventional additives containing cellulose derivatives and which are substantially less expensive than said conventional additives.

For the hereinbefore stated reasons, it is submitted that claim 1 of the present application defines unobvious and unexpectedly advantageous subject matter leading which is thus inventive.

(3) The Written Opinion does not contain comments or objections to the wording of the description and claims so that no further amendment to that made in claim 6 are deemed to be necessary.

Should the examiner, after analyzing the present submissions, have any further comments to the wording of the description and claims, issuance of a further Written Opinion is respectfully solicited so as to allow applicants to make any further necessary amendments centrally in the international phase of the present application, before entering the national phases. In view that the final date for establishing the International Preliminary Examination Report is the 20th September 2000, sufficient time for issuance of and response to such a further Written Opinion should be available.

Respectfully submitted,

Javier UNGRIA

CLAIMS

1. An additive for gypsum and special mortar that comprises a solid mineral component selected from among clay, characterized in that it comprises at least a modified natural gum, and in that the mineral component is a rheological grade clay selected from among attapulgite, sepiolite and mixtures thereof.

2. An additive according to claim 1, characterized in that the additive comprises at least

20-75% by weight of the solid mineral component;
25-80% by weight of modified natural gum.

3. An additive according to claim 1, characterized in that it comprises

35-60% by weight of the solid mineral component;
40-65% by weight of modified natural gum.

4. An additive according to claim 1, 2 or 3, characterized in that the solid mineral component is rheological grade sepiolite.

5. An additive according to claim 1, 2 or 3, characterized in that the modified natural gum is at least one combination of at least two monosaccharides, glucose, mannose, galactose, and glucuronic acid, modified by etherification.

6. An additive according to claim 6, characterized in that the combination of monosaccharides is etherified with an alkylene oxide selected from among ethylene oxide, propylene oxide and butylene oxide.

7. An additive according to claim 6, characterized in that the monosaccharide combination is a galactomanane.

8. An additive according to claim 1, 2 or 3, characterized in that the modified natural gum is modified guar gum.

9. A filled composition of conglomerate building material selected from among gypsum and special mortar, that comprises a fraction selected from among a cement fraction, a gypsum fraction and an aggregate fraction, characterized in that it also comprises 0.05-1.2% by weight of the additive defined in any of the claims 1 to 8.

10. A filled composition according to claim 9, characterized in that it comprises 0.2-0.9% by weight of the additive.

11. Use of an additive according to any of the claims 1-8, as a component in a special mortar.

12. Use of an additive according to any of claims 1-8 as a component in gypsum.

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35-60% by weight of the solid mineral component;
40-65% by weight of modified natural gum.

4. An additive according to claim 1, 2 or 3, characterized in that the solid mineral component is rheological grade sepiolite.

5. An additive according to claim 1, 2 or 3, characterized in that the modified natural gum is at least one combination of at least two monosaccharides, glucose, mannose, galactose, and glucuronic acid, modified by etherification.

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7. An additive according to claim 6, characterized in that the monosaccharide combination is a galactomanane.

8. An additive according to claim 1, 2 or 3, characterized in that the modified natural gum is modified guar gum.

9. A filled composition of conglomerate building material selected from among gypsum and special mortar, that comprises a fraction selected from among a cement fraction, a gypsum fraction and an aggregate fraction, characterized in that it also comprises 0.05-1.2% by weight of the additive defined in any of the claims 1 to 8.

10. A filled composition according to claim 9, characterized in that it comprises 0.2-0.9% by weight of the additive.

11. Use of an additive according to any of the claims 1-8, as a component in a special mortar.

12. Use of an additive according to any of claims 1-8 as a component in gypsum.